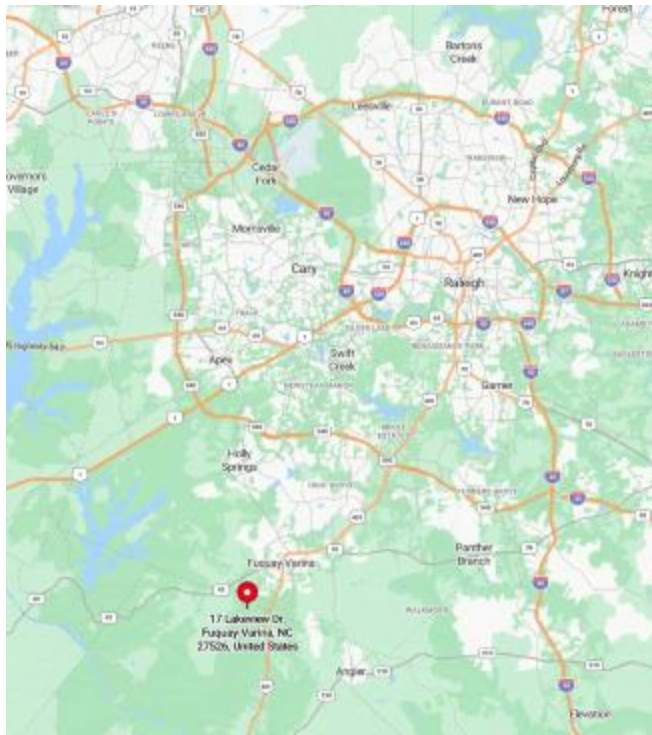


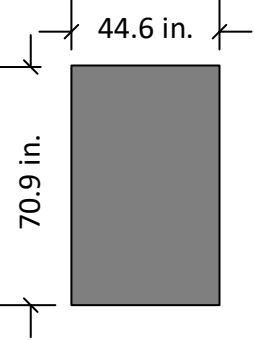
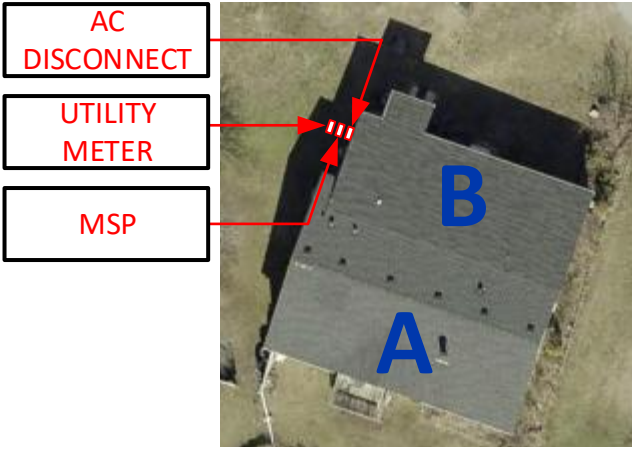



PHOTOVOLTAIC ROOF MOUNT SYSTEM			SR.#	PROJECT INFORMATION		
CODE AND STANDARDS THE INSTALLATION OF SOLAR ARRAYS AND PHOTOVOLTAIC POWER SYSTEMS SHALL COMPLY WITH THE FOLLOWING CODES: <ul style="list-style-type: none">2020 NATIONAL ELECTRICAL CODE2018 NORTH CAROLINA RESIDENTIAL CODE2018 NORTH CAROLINA BUILDING CODEALL OTHER ORDINANCE ADOPTED BY THE LOCAL GOVERNING AGENCIES SITE NOTES / OSHA REGULATION <ol style="list-style-type: none">A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.THE SOLAR PV INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.ROOFTOP MOUNTED PHOTOVOLTAIC PANELS AND MODULES SHALL BE TESTED, LISTED AND IDENTIFIED BY RECOGNIZED ELECTRICAL TESTING LABORATORY.MODULES AND SUPPORT STRUCTURES SHALL BE GROUNDEDSOLAR INVERTER SHALL BE LISTED TO UL1741ALL CONDUCTORS SHALL BE COPPER AND SHOULD BE 75 AND 90 DEG RATEDREMOVAL OF AN INTERACTIVE INVERTER OR OTHER EQUIPMENT SHALL NOT DISCONNECT THE BONDING CONNECTION BETWEEN THE GROUNDING ELECTRODE CONDUCTOR, THE PHOTOVOLTAIC SOURCE AND OUTPUT CIRCUIT GROUNDED CONDUCTORS.LIVE PARTS OF PV SOURCE CIRCUITS AND PV OUTPUT CIRCUITS OVER 150V TO GROUND SHALL NOT BE ACCESSIBLE TO OTHER THAN QUALIFIED PERSONS WHILE ENERGIZED.ALL PV MODULES AND ASSOCIATED EQUIPMENT AND WIRING SHALL BE PROTECTED FROM PHYSICAL DAMAGE. SOLAR CONTRACTOR <ol style="list-style-type: none">MODULE CERTIFICATIONS INCLUDE UL1703, IEC61646, IEC61370.IF APPLICABLE, MODULE GROUNDING LUGS MUST BE INSTALLED AT THE MARKED GROUNDING LUG HOLES PER THE MANUFACTURERS INSTALLATION REQUIREMENTS.AS INDICATED BY DESIGN, OTHER NRTL LISTED MODULE GROUNDING DEVICES MAY BE USED IN PLACE OF STANDARD GROUNDING LUGS AS SHOWN IN MANUFACTURER DOCUMENTATION AND APPROVED BY THE AHJ.ALL MICROINVERTERS, PHOTOVOLTAIC MODULES, AC COMBINERS, DC-AC CONVERTERS AND SOURCE CIRCUIT COMBINERS INTENDED FOR USE IN A PHOTOVOLTAIC POWER SYSTEM WILL BE IDENTIFIED AND LISTED FOR THE APPLICATION PER NEC690.4(B).ALL SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH LOCAL BUILDING CODE.TERMINALS AND LUGS WILL BE TIGHTENED TO MANUFACTURER TORQUE SPECIFICATIONS (WHEN PROVIDED) IN ACCORDANCE WITH NEC CODE 110.14(D) ON ALL ELECTRICAL CONNECTIONS.MAX DC VOLTAGE CALCULATED USING MANUFACTURER PROVIDED TEMP COEFFICIENT FOR VOC UNLESS NOT AVAILABLE.			1	PV MODULES	25 x Canadian Solar CS6.1-54TM-455H	
			2	INVERTER + BATTERY	01 X POWERWALL 3	
			3	ROOF TYPE	ASPHALT SHINGLES	
			4	RACKING	PSR-B84 RAILS (BLACK)	
			5	MOUNTING TYPE	INSTAFLASH2 (BLACK)	
			6	DC SIZE	11.375 KW	
			7	AC SIZE	11.5 KVA	
			SR.#	PROJECT INFORMATION		
DESIGN CRITERIA WIND SPEED: 120 MPH GROUND SNOW LOAD: 15 PSF WIND EXPOSURE FACTOR: B			1	PV1	DRAWING INDEX	
			2	PV2	SITE LAYOUT	
			3	PV3	STRING MAPPING	
			4	PV4	ELECTRICAL ONE LINE DIAGRAM	
			5	PV5	DETAILED ELECTRICAL WIRING SCHEMATIC	
			6	PV6	PV LABELS	
			7	PV7	BILL OF MATERIALS	
			8	PV8	ATTACHMENT DETAILS	
						
			VICINITY MAP		TOP VIEW OF THE BUILDING	
UTILITY COMPANY: DUKE ENERGY PERMIT ISSUER (AHJ): HARNETT COUNTY						



NABCEP
CERTIFIED
PV Installation
Professional
Ali Buttar
PVIP #031310-32

ROOF DESCRIPTION				MODULE DIMENSIONS	PV System Dead Load (Panel + Racking weight) / PV System Area (No. of panels x Weight of panel(lbs.) +Length of racking(ft.) x 1.15 lb.ft) / (No. of panels x Height x Width) = Total psf				
ROOF	PITCH	AZIMUTH	NO. OF MODULES						
A	15°	199°	14		ROOF	A	B		
B	11°	19°	11		DEAD LOAD (PSF)	2.90	2.67		



Vent		No vent will be covered by PV modules during the installation.
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SYSTEM DETAILS
NUMBER OF PANELS : 25
PANELS MODEL : CANADIAN SOLAR CS6.1-54TM-455H
DC SIZE : 11.375 KW
AC SIZE : 11.5 KVA



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Customer Information:

Virginia Blanton

17 Lakeview Dr
Fuquay-Varina, NC 27526

Customer Signature:

Sheet Name:

Site Layout

JOB NUMBER:

25-275-PB

Date:

07/24/2025

Revision:

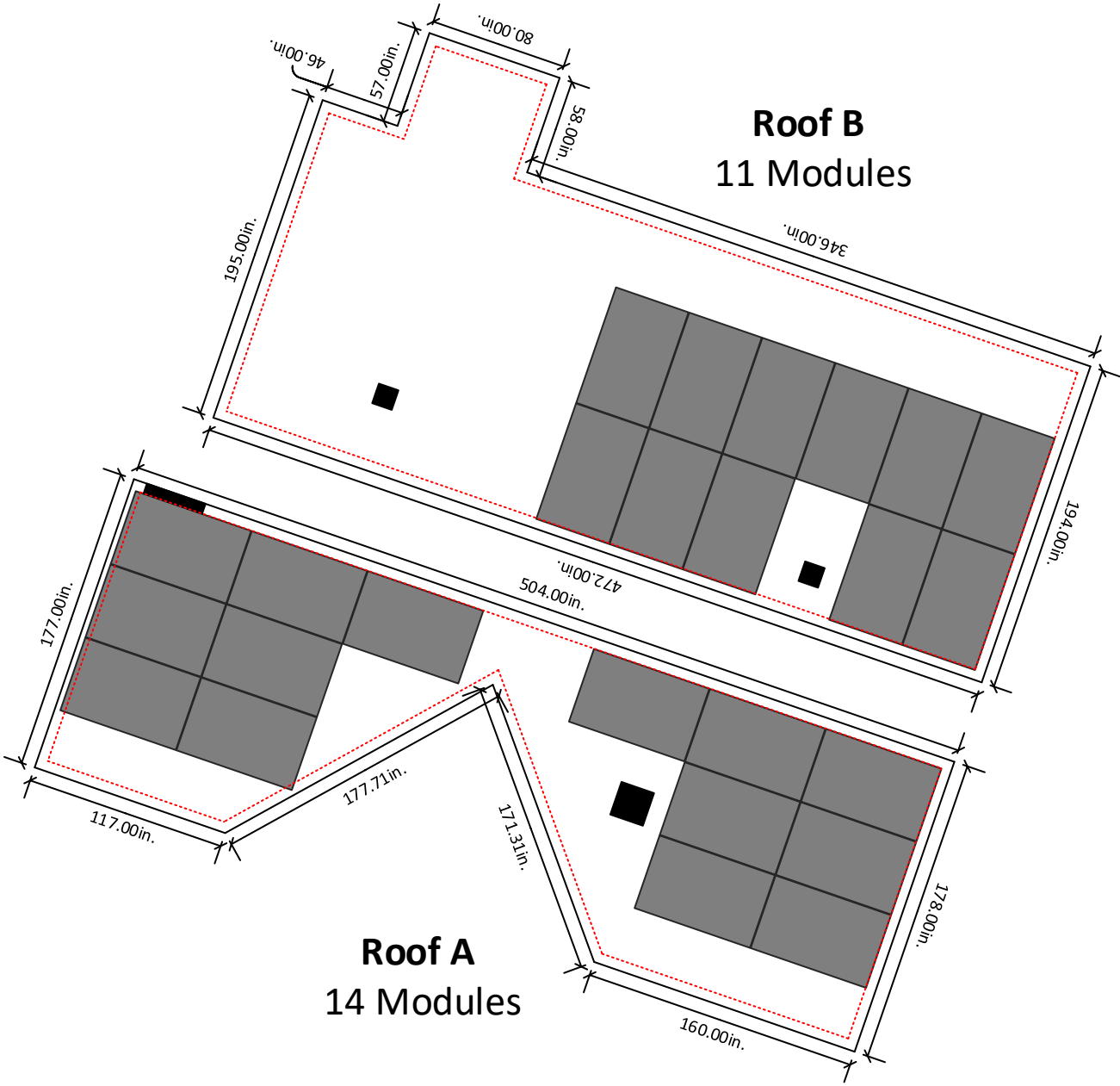
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17" X 22"

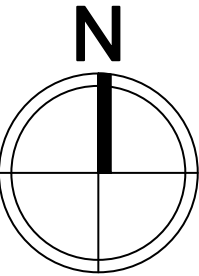
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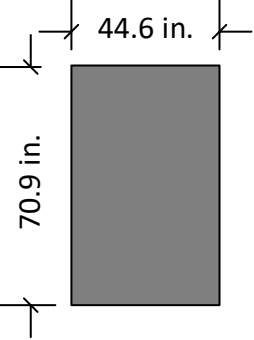

PV2

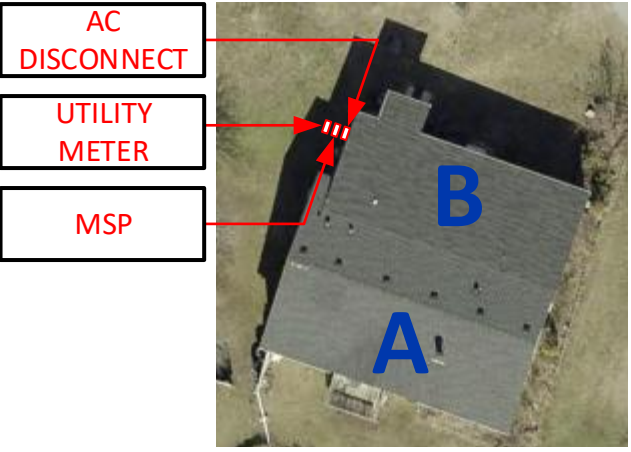


6in setback from
sides of the roof

SITE LAYOUT
SCALE: 1/8" - 1'



ROOF DESCRIPTION				MODULE DIMENSIONS	STRING LAYOUT					
ROOF	PITCH	AZIMUTH	NO. OF MODULES		TESLA POWERWALL3					
					Strings #	No. of Modules	Color	Strings #	No. of Modules	Color
A	15°	199°	14		String 1	11				
B	11°	19°	11		String 2	07				
					String 3	07				
Tesla MCI (Mid Circuit Interrupter)										



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Sheet Name:

String Mapping

JOB NUMBER:

25-275-PB

Date:

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Revision:

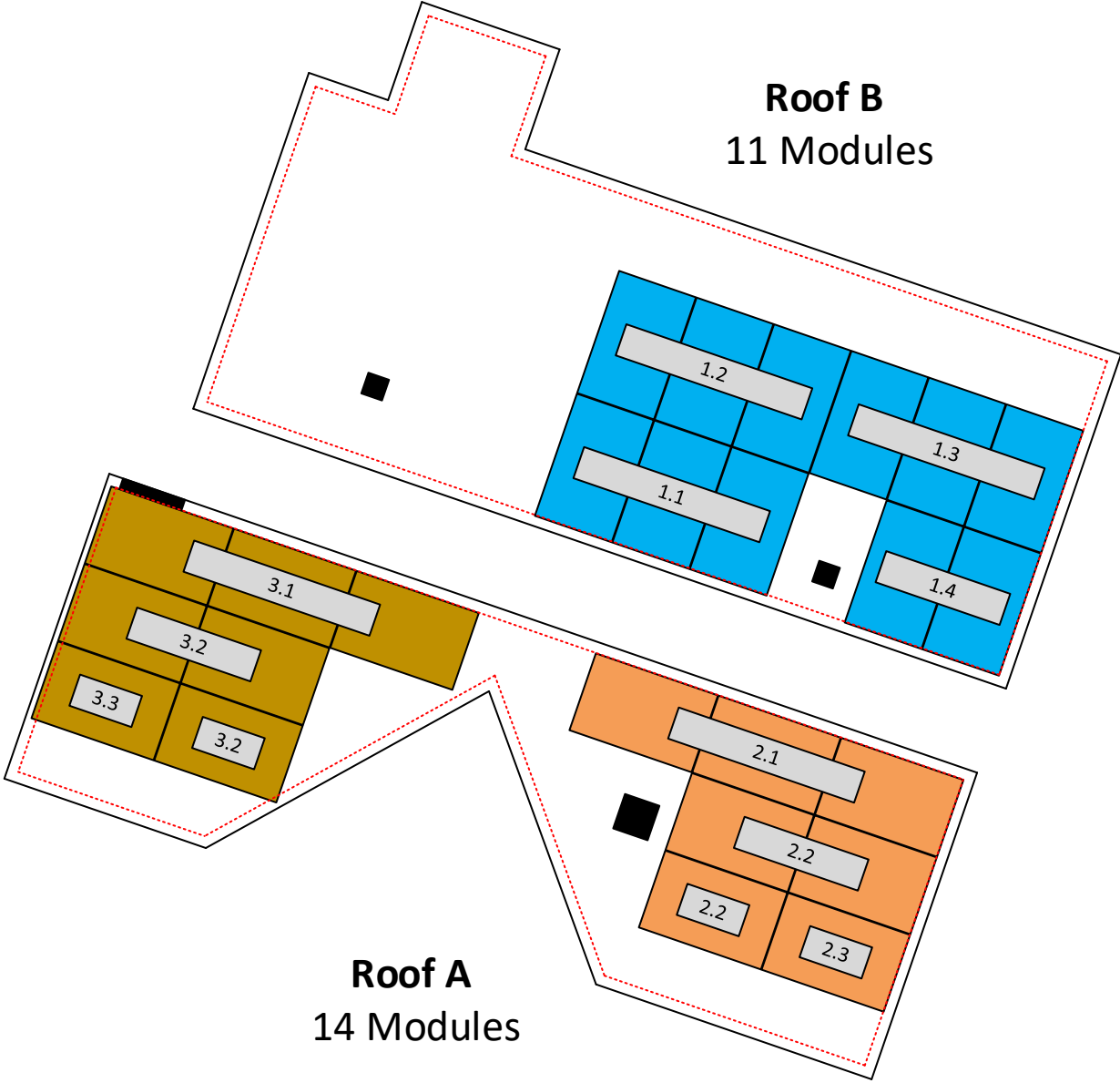
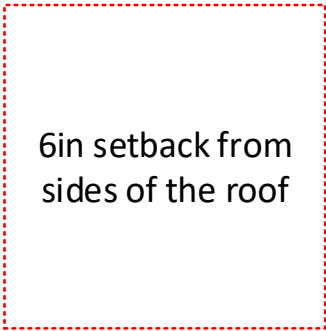
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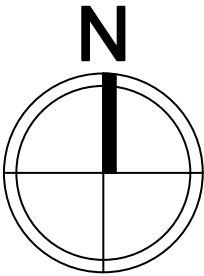
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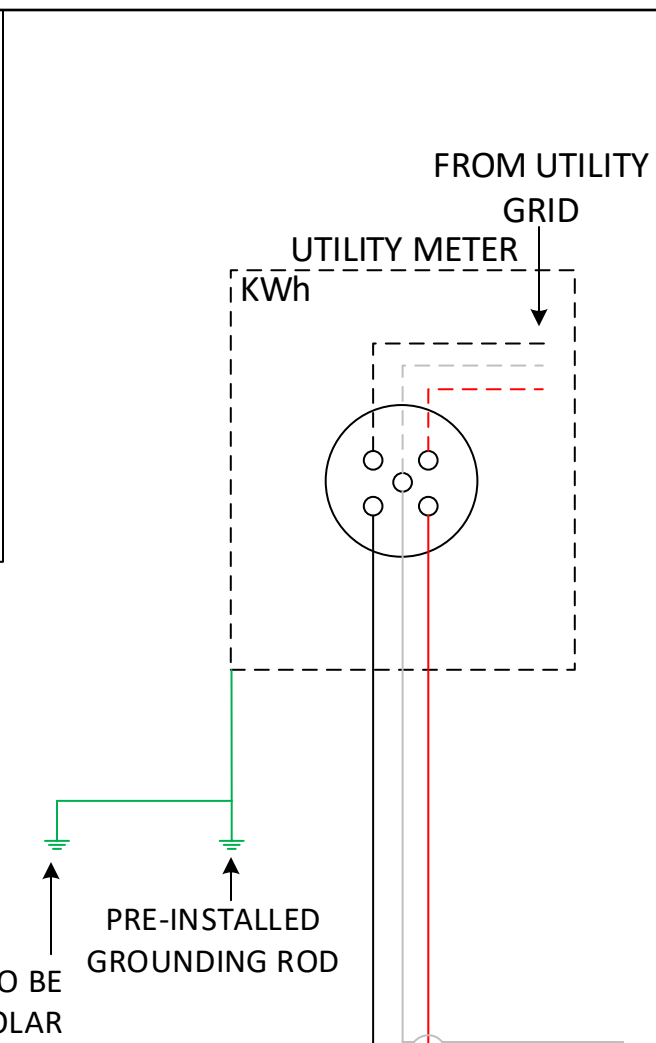
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PV3



STRING MAPPING
SCALE: 1/8" - 1'



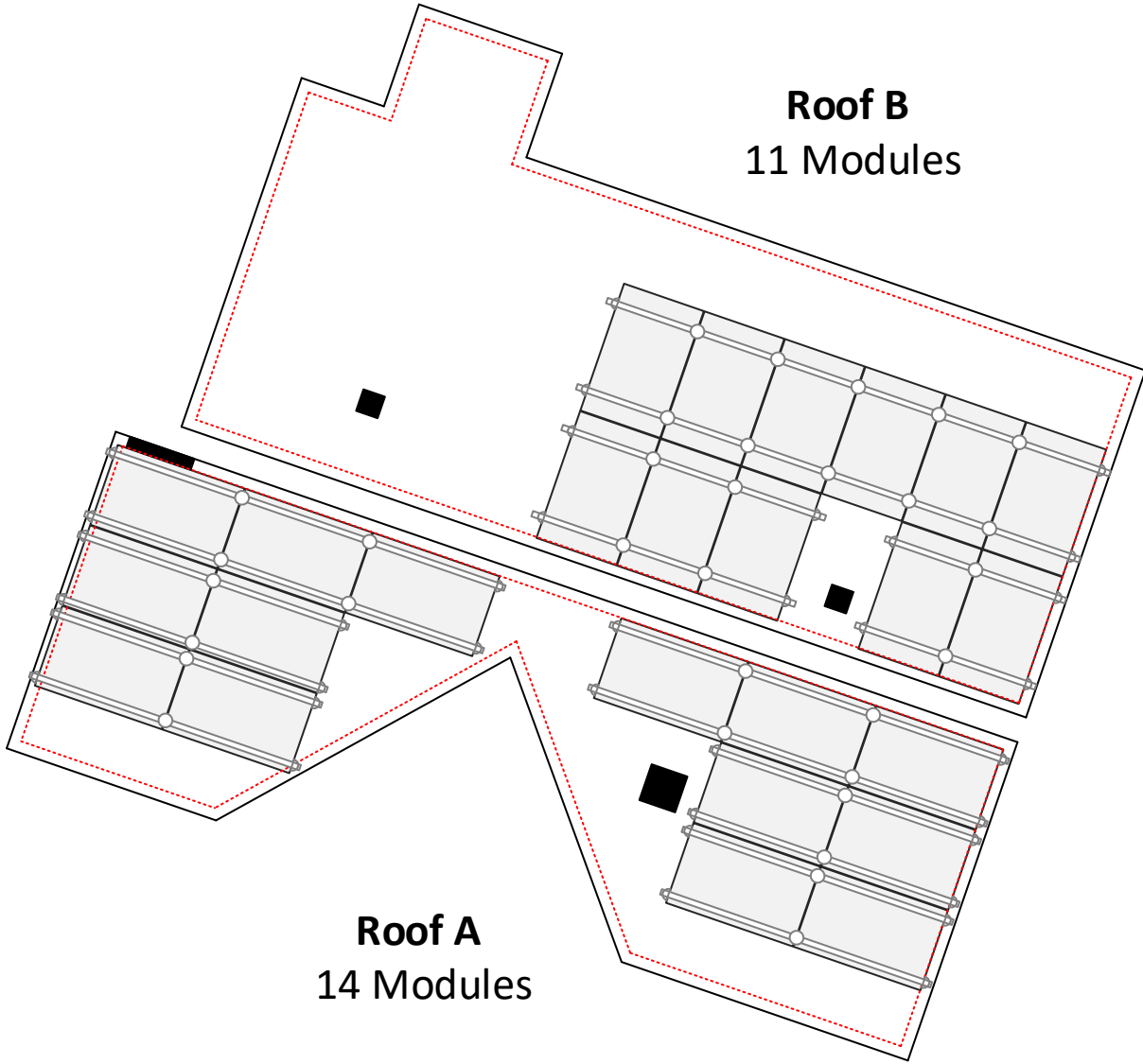


PV5



ROOF DESCRIPTION				MODULE DIMENSIONS	<div>Rails and Splices : PSR-B84 (BLACK)</div> <div>Roof Attachment : Pegasus InstaFlash2</div> <div></div> <div>AC DISCONNECT</div> <div>UTILITY METER</div> <div>MSP</div> <div></div>	
ROOF	PITCH	AZIMUTH	NO. OF MODULES	<div></div>		
A	15°	199°	14			
B	11°	19°	11			

PV LABELS		
Sr. No	Code	Qty
01	02-314	12
02	03-301	01
03	03-302	01
04	02-316	02
05	03-308	01
06	03-390	01
07	03-306	01
08	05-215	02
09	05-230	02
10	03-230	01
11	05-372	01
12	05-216	01
13	05-342	01
14	07-111	01
15	8M-001	03
16	8M-002	03
17	03-395	01
18	04-304	01
19	8M-004	03
20	03-511	01



RAILS AND MOUNTING SYSTEM

- 44 x PSR-B84: Pegasus Rail, Black, 84" (7 Feet)
- 26 x PSR-SPLS: Pegasus - Bonded, Structural Splice
- 32 x PSR-MCB: Pegasus - Multiclamp, Mid/End, 30 to 40 mm, Black
- 36 x PSR-HEC: Pegasus - Hidden End Clamp
- 15 x PSR-LUG: Pegasus - Grounding Lug
- 38 x PSR-WMC: Pegasus - Wire Management Clip
- 05 x PSR-CBG: Pegasus - Cable Grip
- 36 x PSR-CAP: Pegasus - End Cap
- 68 x PIF2-BDT: Pegasus InstaFlash2 – Deck or Rafter Attach – with Dovetail T-Bolt
- 200 x PF-DRW85: Pegasus Fastener - Deck-Rafter 85mm
- 50 x S6405: Heyco Wire Clips
- 02 x GEOC GC66100: SEALANT 2300 10.3OZ CLEAR (20) GEOCEL 230 TRIPOLY CLEAR
- 15 x MULTI 32.0017P0001-UR: PV MC4 MALE (10) [1000]
- 15 x MULTI 32.0016P0001-UR: PV MC4 FEMALE (10) [1000]

SOLAR MODULES

- 25 x Canadian Solar CS6.1-54TM-455H

INVERTER & SUPPORTING ITEMS

- 01 x 1707000-00-J :Tesla Powerwall 3
- 10 x 1879359-15-B: Tesla MCI-2 High Current
- 01 x 1841000-01-C: Backup GateWay 3
- 01 x 1549184-00-X: 02" Conduit Hub Kit

WIRE

- 01 x WIRPV 2KVPV10STRBLK500: #10 PV WIRE BLK (Cu) 500ft

ELECTRICAL ITEMS

- 01 x BW2200: Gateway Main Breaker-Eaton BW2200
- 01 x BR260: Eaton BR 60/2 for Backup Gateway 3
- 01 x DG222URB: 250volt/60amp/2pole non fusible disconnect (NEMA 3R)
- 01 x EATON M22PVK01: 22.5MM PB EMG STOP W/ CONTACTOR
- 01 x Eaton M22I1PG: SFC MTG ENC Emergency Stop Enclosure
- 01 x EZSLR JB-1.2: SolaDeck

Roof Flashings

- 12 x PSCA-0MB0: Roof Flashing Conduit Supports
- 12 x BPT 921S: 3/4" 1H EMT PIPE STRAP STEEL



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Customer Signature:

Sheet Name:

Bill of Material

JOB NUMBER:

25-275-PB

Date:

07/24/2025

Revision:

A

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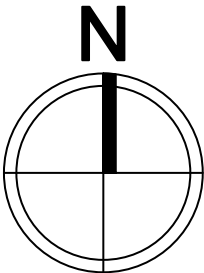
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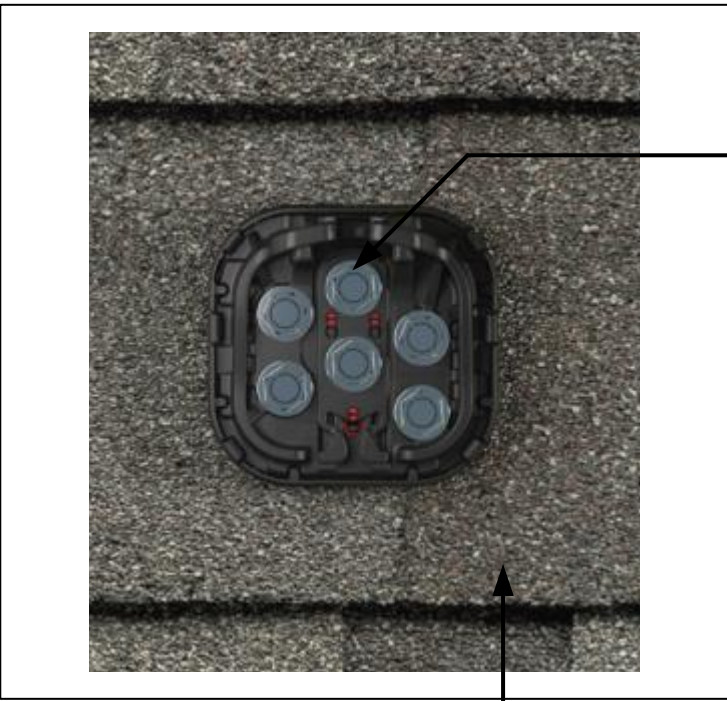


6in setback from
sides of the roof

BILL OF MATERIAL
SCALE: 1/8" - 1'

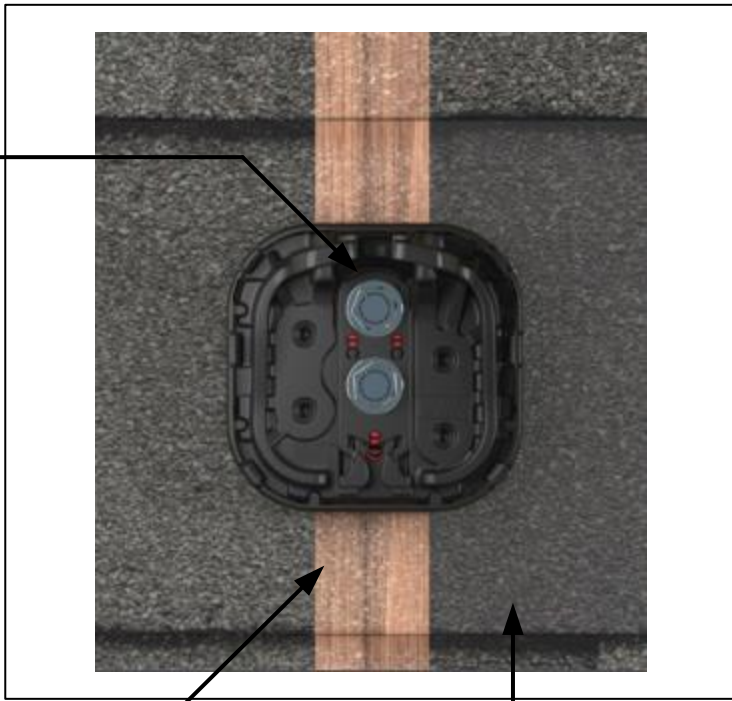


Deck Attach – 6 Fasteners



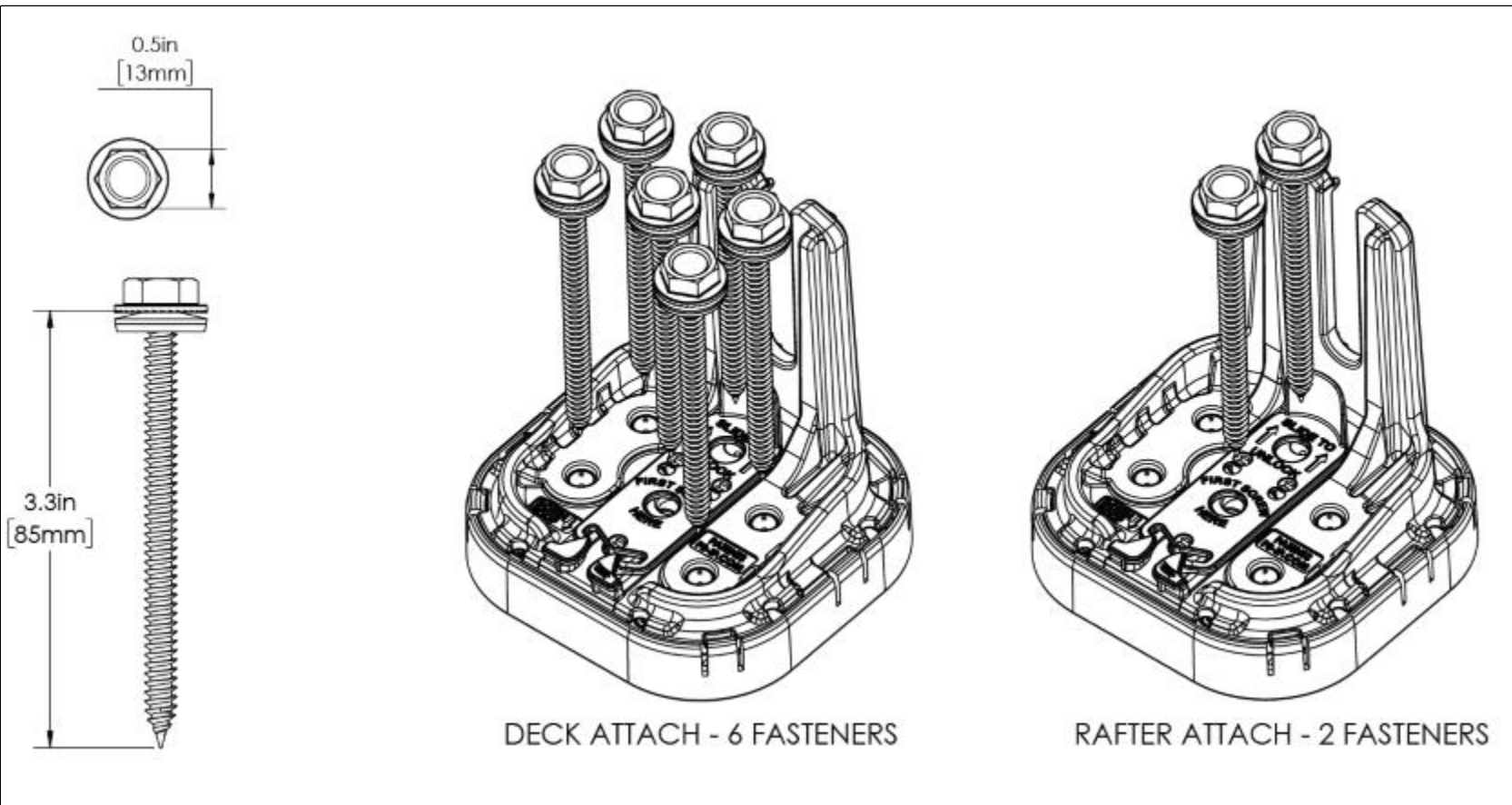
Asphalt
Shingle Roof

Rafter Attach – 2 Fasteners



RAFTER

Asphalt
Shingle Roof



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Sheet Name:

Attachment Details

JOB NUMBER:

25-275-PB

Date:

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Revision:

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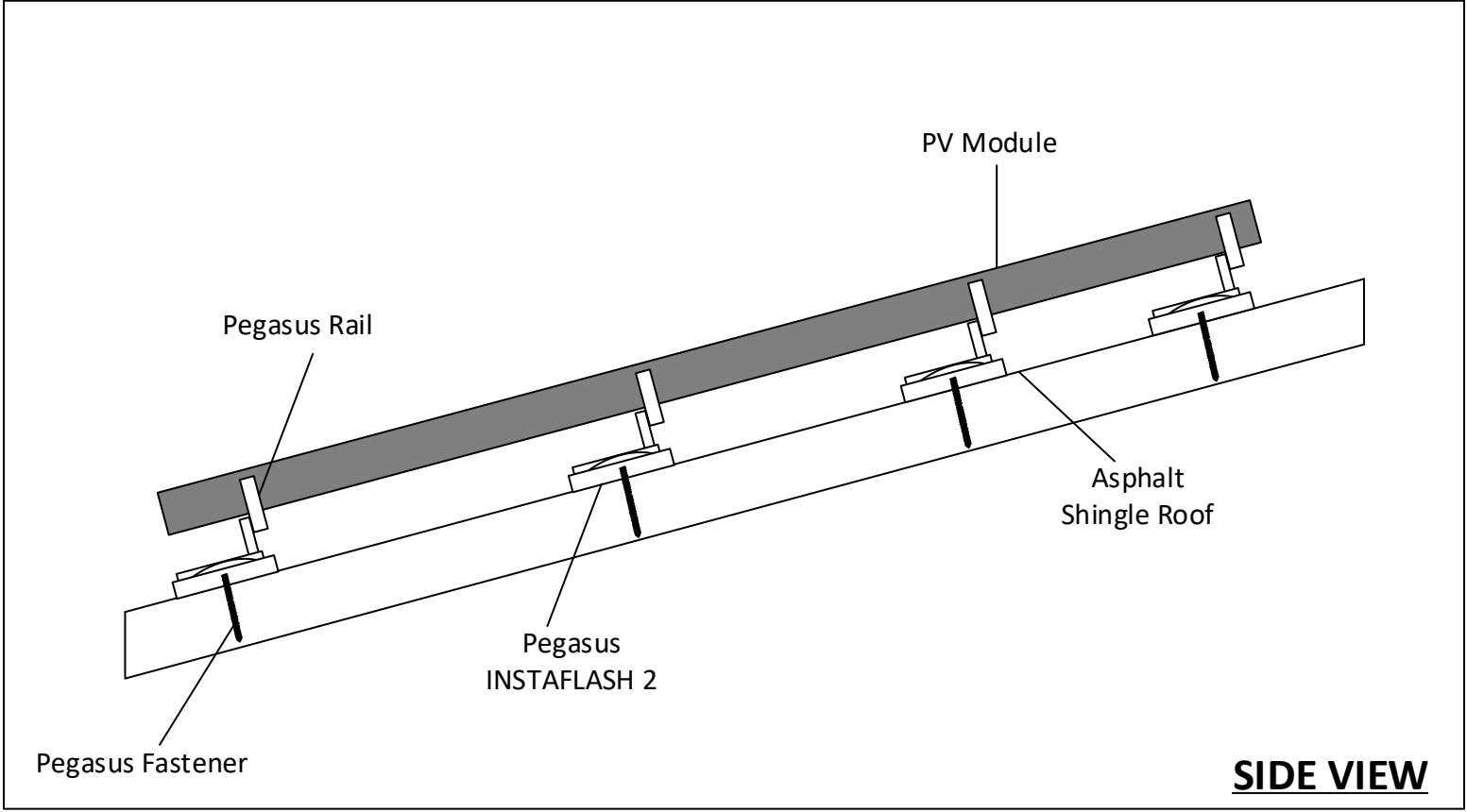
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PV8



Multi-Clamp	Hidden End Clamp	MLPE Mount	Dovetail T-Bolt	Ground Lug	Cable Grip
Torque Value 100 in-lbs.	Torque Value 135 in-lbs.	Torque Value 135 in-lbs.	Torque Value 300 in-lbs.	Torque Value 135 in-lbs.	Torque Value 135 in-lbs.



SIDE VIEW

PV Dead Load	
Roof A	PV System Dead Load (Panel + Racking weight) / PV System Area (14 panels x 50.7lbs./panel + 166 ft. of racking x 1.17 lb.ft) / (14 panels x 5.9' x 3.71') = 2.90 psf
Roof B	PV System Dead Load (Panel + Racking weight) / PV System Area (11 panels x 50.7lbs./panel + 83 ft. of racking x 1.17 lb.ft) / (11 panels x 5.9' x 3.71') = 2.67 psf